

LOW-LOSS PRINTED CIRCUIT BOARD ANTENNA  
STRUCTURE AND METHOD OF MANUFACTURE THEREOF

CROSS-REFERENCE TO PROVISIONAL APPLICATION

[0001] This application claims the benefit of U.S. Provisional Application No. 60/295,191 entitled "LOW-LOSS PRINTED CIRCUIT ANTENNA," to Jan Wielsma, filed on June 1, 2001, which is commonly assigned with the present invention and incorporated herein by reference as if reproduced herein in its entirety. *this application is a continuation*

TECHNICAL FIELD OF THE INVENTION

*put amendment  
of 9-30-03 here*

[0002] The present invention is directed, in general, communication devices and, more specifically, to an antenna structure having a low-loss and high efficiency, and a method of manufacture thereof.

BACKGROUND OF THE INVENTION

[0003] Printed circuit boards (PCBs) are the benchmark for mounting electronic circuit components in today's communications hardware. Conventional PCBs include a rigid substrate to provide support for mounting electronic components in communications

**IN THE SPECIFICATION:**

This application is a continuation of U.S. patent application Serial No. 10/126,600, entitled "LOW LOSS PRINTED CIRCUIT BOARD ANTENNA STRUCTURE AND METHOD OF MANUFACTURE THEREOF", filed on April 19, 2002. The above-listed application is commonly assigned with the present invention and is incorporated herein by reference as if reproduced herein in its entirety.

**IN THE CLAIMS:**

Claims 1-20 are presently canceled without prejudice or disclaimer.

21. (New) An antenna structure, comprising:

an antenna trace formed on a substrate;

a ground plane formed on said substrate, wherein said ground plane is non-overlapping with said antenna trace; and

an insulation region extending through said substrate and located between said antenna trace and said ground plane.

22. (New) The antenna structure recited in Claim 21, wherein said ground plane is coplanar with said antenna trace.

23. (New) The antenna structure recited in Claim 21 wherein said insulation region includes a plurality of insulation regions.